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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,213	09/30/2003	Thomas Birkhoelzer	32860-000632/US	9598

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HARNESSE, DICKEY & PIERCE, P.L.C.  
P.O.BOX 8910  
RESTON, VA 20195

EXAMINER
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KENNEDY, ADRIAN L

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/673,213	<b>Applicant(s)</b> BIRKHOELZER, THOMAS	
	<b>Examiner</b> Adrian L. Kennedy	<b>Art Unit</b> 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                   |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/29/04</u> . | 6) <input type="checkbox"/> Other: _____                                                |

***Examiner's Detailed Office Action***

1. This Office Action is responsive to application **10/673,213**, filed **September 30, 2003**.
2. **Claims 1-24** have been examined.

***Information Disclosure Statement***

3. Applicant is respectfully reminded of the ongoing Duty to disclose 37 C.F.R. 1.56 all pertinent information and material pertaining to the patentability of applicant's claimed invention, by continuing to submit in a timely manner PTO-1449, Information Disclosure Statement (IDS) with the filing of applicant's application or thereafter.

***Claim Objections***

4. Claim 22 is objected to under 37 CFR 1.75(c) as being in improper form because it appears to be two separate claims that have been joined together improperly. This claim has been treated on the merits as if the last two lines of this claim had been deleted. In this regard, claim 22 appears to be the same as claim 20. These claims are objected to as being obvious duplicate claims and if one of these claims were found to be allowable, the other claim would be rejected thereover under 35 USC 101.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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6. Claims 1-24 are rejected under 35 U.S.C 101 as being directed to nonstatutory subject matter. In particular claims 1-9, 15-18 and 24 are considered to be directed to an apparatus and claims 10-14 and 19-23 are considered to be directed to a method, all in accordance with “The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility”, Annex IV (a). It should be noted that the Guidelines provide a framework for the rejection, but it is the case law cited therein that provides the legal authority for this rejection.

Claims 1-24 do not set forth a “useful, concrete and tangible result”. In particular, it is not considered that these claims set forth a tangible result. Claims 1-24 do not produce a practical real world result. Claims 1-9, 15-18 and 24 appear to be an apparatus which performs data manipulations but produces no real world output. Claims 8-14 appear to be nothing more than an abstract algorithm which is not statutory.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by *Barrett et al.* (USPN 6,029,144).

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Regarding claim 1:

Barrett et al. teaches

A workflow management system (C 8, L 26-29; “*auditor system 256 preferably includes an audit workflow system*”) with continuous status management (C 2, L 54-56;

“*automated auditing*”), comprising:

an apparatus (C 8, L 22-26; “*auditor system*”) adapted to detect (C 6, L 9-12;

“*policy checker 208 comprises a means for testing the selected expense entries in audit queue 308 for compliance with established policies and rules*”; The

examiner takes the position that in order to test expense entries, the policy checker has to detect if there is an appropriate rule or policy that dictates whether reimbursement should be paid for the expense being audited) fuzzy process

definitions (C 12, L 54-57; “*fuzzy rules*”; The examiner takes the position that the purpose of the rules, in the invention of Barrett et al., is to define the

reimbursement process in the automated auditing system);

an apparatus adapted to control (C 8, L 44-45; “*auditor workflow system 216*

*guides the auditors through each claim audit*”) activity stages in a workflow (C 8,

L 26-29; “*phases of selection for audit, assignment to an auditor and auditing activities*”) for the purpose of processing the process definitions (The examiner

takes the position that the auditor system controls process flow according to the rules is apparent in the statement that modifications made to the system by the

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rules are saved (C 8, L 19-21; “*modification that are made by these rules are saved*”)); and  
means for evaluating the process definitions for each process instance (C 8, L 26-29; “*phases of selection for audit, assignment to an auditor and auditing activities*”; The examiner takes the position that rules (process definitions) are evaluated for each phase (process instance), in the invention of Barrett et al., and as a result Barrett et al. anticipates the applicant’s claimed invention).

Regarding claim 2:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses includes an interference machine (C 11, L 1-15; “*Kohonen network*”; The examiner takes the position that the Kohonen network acts as a interference machine in the invention of Barrett et al. This “interference” is apparent in the operations of weighting inputs and the delivering (forwarding) of usage pattern statistics (instruction) that are used in later phases (activity stages) to determine which usage patterns have high probability of fraud).

Regarding claim 3:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses includes an interference mechanism, arranged in an interference machine (C 13, L 57-59; “*SOM neural network*”) and in contact with a process instance manager, adapted to forward a

signal corresponding to the respective instruction for activities of the activity stages to the process instance manager (The examiner takes the position that the SOM neural network acts as an interference machine. This “interference” is apparent in the operation of creating fraud detection rules that can be used to detect patterns indicative of fraud. Additionally, the examiner takes the position that although not explicitly stated, the existence of a process instance manager is inherent in the process of the auditor workflow system tracking the path of an expense entry through the phases of the audit (C 8, L 26-29)).

Regarding claim 4:

Barrett et al. teaches

The workflow management system wherein the activity stages include an associated control stage (The examiner takes the position that the auditor system controls process flow according to the rules is apparent in the statement that modifications made to the system by the rules are saved (C 8, L 19-21; “*modification that are made by these rules are saved*”), supplied with an activity threshold (C 14, L 11-14; “*threshold value*”) by an evaluation stage (C 14, L 11-14; “*data pattern analyzer*”) for the process status and connected to a functional stage for carrying out the activities (The examiner takes the position that although a functional stage for carrying out activities is not explicitly recited, it is inherent in the invention and is apparent in the process of determining if accumulated expense entries exceed a threshold value in Column 14, Lines 11-14), and wherein the functional stage is adapted to forward a signal corresponding to the

respective state of the activities of the activity stages to the process instance manager (The examiner takes the position that the process of forward a signal corresponding to the respective state of the activities to the process instance manager is equivalent to the process of forward an employees serial number and entry keys (signals) that indicate possible fraud (respective states of the auditing activities) to an administration system (process instance manager)).

Regarding claim 5:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses is adapted to deliver instructions (C 8, L 44-45; “*auditor workflow system 216 guides the auditors through each claim audit*”; The examiner takes the position that in guiding the auditors, the auditor workflow system delivers some form of instructions) to activities of the activity stages with an associated continuous variable (The examiner takes the position that the continuous variables claimed by the applicant are equivalent to the flags, taught by Barrett et al., in Column 12, Lines 54-57), the instructions being compared with an activity threshold (C 14, L 11-14; “*threshold value*”) for the control stage and providing corresponding "fuzzy" worklists (C 8, L 36-38; “*work lists*”; The examiner takes the position that because the fraud detection process taught by Barrett et al. completes task based on fuzzy rules, it would be inherent for all work list to be fuzzy list. This is apparent because the completion of a task would be dependent on whether certain rules were executed. This is also apparent in the fact that the invention of Barrett et al.



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continuously modifies rules (C 13, L 51-52; “*rules may need to be modified*”)) for each activity of the activity stages, which reports its state to the at least one apparatus in the form of continuous variables.

Regarding claim 6:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses includes causal networks (C 10, L 52-54; “*data pattern analyzer 210 preferably comprises a Self Organizing Map (SOM) Neural Network, and in particular, a Kohonen network*”; The examiner takes the position that the SOM taught by Barrett et al. is a causal network. This is evident in the fact that based on its analysis of expense patterns (cause) it makes rules (effect) (C 11, L 16-21)).

Regarding claim 7:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses is adapted to operate on the basis of the laws of fuzzy logic (C 12, L 54-57; “*fuzzy rules*”; The examiner takes the position that the fuzzy rules define the logic used to process the expense entries, and as a result of the logic rules being “fuzzy”, the logic is inherently “fuzzy”).

Regarding claim 8:

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Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses is adapted to operate on the basis of the laws of probability-based modeling (C 11, L 8-11; *“the Kohonen network will be manipulated to model the probability distribution”*).

Regarding claim 9:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses is adapted to operate on the basis of the laws of general weighting (C 11, L 6-7; *“neurons closest to the input can then adjust their weights”*).

Regarding claim 10:

Barrett et al. teaches

A method for implementing a workflow with continuous status management (C 2, L 54-56; *“automated auditing”*) through fuzzy process definitions, comprising:

using continuous instructions (C 2, L 54-56; *“automated auditing”*) and states (C 8, L 26-29; *“phases”*) and at least one of logic combinations (C 12, L 54-57; *“fuzzy rules”*); The examiner takes the position that the fuzzy rules define the logic used to process the expenses entries, and as a result of the logic rules being “fuzzy”, the logic is inherently “fuzzy”) and continuous mapping operations (The examiner takes the position that fraud flags are continuously mapped to expense entries which exhibit a high probability of fraud. This mapping takes place using

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the data pattern analyzer (C 10, L 52-56) and is exemplified in the structure of the SOM Neural Network (C 10, L 52-56)) operating thereon.

Regarding claim 11:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed using at least one of fuzzy rules and relations (C 12, L 54-57; “*fuzzy rules*”; The examiner takes the position that the use of fuzzy rules to identify expenses as fraud (relate expenses to fraud), in the invention Barrett et al., anticipates applicant’s claimed invention).

Regarding claim 12:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of fuzzy logic (C 12, L 54-57; “*fuzzy rules*”; The examiner takes the position that the fuzzy rules define the logic used to process the expense entries, and as a result of the logic rules being “fuzzy”, the logic is inherently “fuzzy”).

Regarding claim 13:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of probability-based modeling (C 11, L 8-11; “*the Kohonen network will be*

*manipulated to model the probability distribution”).*

Regarding claim 14:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of control systems (C 8, L 44-45; “*auditor workflow system 216 guides the auditors through each claim audit*”) with priority weighting (C 14, L 21-23; “*prioritizer 212 which ranks detected rule violations*”; The examiner takes the position that priority weighting claimed by the applicant and the priority ranking taught by Barrett et al. are equivalent and as a result Barrett et al. anticipates applicant’s claimed invention).

Regarding claim 15:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses includes an interference mechanism, arranged in an interference machine (C 13, L 57-59; “*SOM neural network*”) and in contact with a process instance manager, adapted to forward a signal corresponding to the respective instruction for activities of the activity stages to the process instance manager (The examiner takes the position that the SOM neural network acts as an interference machine. This “interference” is apparent in the operation of creating fraud detection rules that can be used to detect patterns indicative of fraud. Additionally, the examiner takes the position that although not explicitly stated, the existence of a process instance manager is inherent in the process of the auditor workflow

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system tracking the path of an expense entry through the phases of the audit (C 8, L 26-29)).

Regarding claim 16:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses is adapted to deliver instructions (C 8, L 44-45; “*auditor workflow system 216 guides the auditors through each claim audit*”; The examiner takes the position that in guiding the auditors, the auditor workflow system delivers some form of instructions) to activities of the activity stages with an associated continuous variable (The examiner takes the position that the continuous variables claimed by the applicant are equivalent to the flags, taught by Barrett et al., in Column 12, Lines 54-57), the instructions being compared with an activity threshold (C 14, L 11-14; “*threshold value*”) for the control stage and providing corresponding “fuzzy” worklists (C 8, L 36-38; “*work lists*”; The examiner takes the position that because the fraud detection process taught by Barrett et al. completes task based on fuzzy rules, it would be inherent for all work list to be fuzzy list. This is apparent because the completion of a task would be dependent on whether certain rules were executed. This is also apparent in the fact that the invention of Barrett et al. continuously modifies rules (C 13, L 51-52; “*rules may need to be modified*”)) for each activity of the activity stages, which reports its state to the at least one apparatus in the form of continuous variables.

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Regarding claim 17:

Barrett et al. teaches

The workflow management system wherein at least one of the apparatuses is adapted to deliver instructions (C 8, L 44-45; “*auditor workflow system 216 guides the auditors through each claim audit*”; The examiner takes the position that in guiding the auditors, the auditor workflow system delivers some form of instructions) to activities of the activity stages with an associated continuous variable (The examiner takes the position that the continuous variables claimed by the applicant are equivalent to the flags, taught by Barrett et al., in Column 12, Lines 54-57), the instructions being compared with an activity threshold (C 14, L 11-14; “*threshold value*”) for the control stage and providing corresponding “fuzzy” worklists (C 8, L 36-38; “*work lists*”; The examiner takes the position that because the fraud detection process taught by Barrett et al. completes task based on fuzzy rules, it would be inherent for all work list to be fuzzy list. This is apparent because the completion of a task would be dependent on whether certain rules were executed. This is also apparent in the fact that the invention of Barrett et al. continuously modifies rules (C 13, L 51-52; “*rules may need to be modified*”)) for each activity of the activity stages, which reports its state to the at least one apparatus in the form of continuous variables.

Regarding claim 18:

Barrett et al. teaches

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The workflow management system wherein at least one of the apparatuses is adapted to deliver instructions (C 8, L 44-45; “*auditor workflow system 216 guides the auditors through each claim audit*”; The examiner takes the position that in guiding the auditors, the auditor workflow system delivers some form of instructions) to activities of the activity stages with an associated continuous variable (The examiner takes the position that the continuous variables claimed by the applicant are equivalent to the flags, taught by Barrett et al., in Column 12, Lines 54-57), the instructions being compared with an activity threshold (C 14, L 11-14; “*threshold value*”) for the control stage and providing corresponding “fuzzy” worklists (C 8, L 36-38; “*work lists*”; The examiner takes the position that because the fraud detection process taught by Barrett et al. completes task based on fuzzy rules, it would be inherent for all work list to be fuzzy list. This is apparent because the completion of a task would be dependent on whether certain rules were executed. This is also apparent in the fact that the invention of Barrett et al. continuously modifies rules (C 13, L 51-52; “*rules may need to be modified*”)) for each activity of the activity stages, which reports its state to the at least one apparatus in the form of continuous variables.

Regarding claim 19:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of fuzzy logic (C 12, L 54-57; “*fuzzy rules*”; The examiner takes the position that the fuzzy rules define the logic used to process the expense entries, and as a result of the

logic rules being “fuzzy”, the logic is inherently “fuzzy”).

Regarding claim 20:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of probability-based modeling (C 11, L 8-11; “*the Kohonen network will be manipulated to model the probability distribution*”).

Regarding claim 21:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of fuzzy logic (C 12, L 54-57; “*fuzzy rules*”; The examiner takes the position that the fuzzy rules define the logic used to process the expense entries, and as a result of the logic rules being “fuzzy”, the logic is inherently “fuzzy”).

Regarding claim 22:

Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of probability-based modeling (C 11, L 8-11; “*the Kohonen network will be manipulated to model the probability distribution*”).

Regarding claim 23:



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Barrett et al. teaches

The method wherein the continuous mapping operations are performed on the basis of the rules of probability-based modeling (C 11, L 8-11; “*the Kohonen network will be manipulated to model the probability distribution*”).

Regarding claim 24:

Barrett et al. teaches

A workflow management system (C 8, L 26-29; “*auditor system 256 preferably includes an audit workflow system*”) with continuous status management (C 2, L 54-56; “*automated auditing*”), comprising:

means (C 8, L 22-26; “*auditor system*”) for detecting (C 6, L 9-12; “*policy checker 208 comprises a means for testing the selected expense entries in audit queue 308 for compliance with established policies and rules*”; The examiner takes the position that in order to test expense entries, the policy checker has to detect if there is an appropriate rule or policy that dictates whether reimbursement should be paid for the expense being audited) fuzzy process definitions (C 12, L 54-57; “*fuzzy rules*”; The examiner takes the position that the purpose of the rules, in the invention of Barrett et al., is to define the reimbursement process in the automated auditing system);

means for controlling (C 8, L 44-45; “*auditor workflow system 216 guides the auditors through each claim audit*”) activity stages in a workflow (C 8, L 26-29; “*phases of selection for audit, assignment to an auditor and auditing activities*”)

for the purpose of processing the process definitions (The examiner takes the position that the auditor system controls process flow according to the rules is apparent in the statement that modifications made to the system by the rules are saved (C 8, L 19-21; “*modification that are made by these rules are saved*”)); and means for evaluating the process definitions for each process instance (C 8, L 26-29; “*phases of selection for audit, assignment to an auditor and auditing activities*”; The examiner takes the position that rules (process definitions) are evaluated for each phase (process instance), in the invention of Barrett et al., and as a result Barrett et al. anticipates the applicant’s claimed invention).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant’s disclosure. Haughton et al. (ISPN 6,282,531) is cited for his system for managing applied knowledge in multiple dimensions and contexts. Pham et al. (USPN 5,970,482) is cited for his system for data mining using neuroagents. Lee et al. (USPN 5,799,101) is cited for his method and apparatus for highly efficient computer aided screening. Chen et al. (USPN 6,876,894) is cited for his forecast test-out of probed fabrication by using dispatching simulation method. Miikkulainen et al. (USPN 6,988,088) is cited for his systems and methods for adaptive medical decision support. Yaung (USPN 6,405,215) is cited for his workflow agent for a multimedia database system.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrian L. Kennedy whose telephone number is (571) 270-1505. The examiner can normally be reached on Mon -Fri 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALK



Anthony Knight  
Supervisory Patent Examiner  
Technology Center 2100